



ROB NEEDHAM CONSULTING ENGINEER

CREDENTIALS

- ◆ B.S. Chemical Engineering (Minor in Chemistry), Virginia Tech, 2015

PROFESSIONAL EXPERIENCE

- ◆ 2025 – Present: ALL4 LLC, WDC Office, Herndon, VA – Consulting Engineer
- ◆ 2023 – 2025: Black & Veatch, Arlington, VA – Lead Air Sciences Specialist
- ◆ 2020 – 2023: ALL4 LLC, WDC Office, Herndon, VA – Consulting Engineer
- ◆ 2018 – 2020: ALL4 LLC, WDC Office, Herndon, VA – Project Engineer
- ◆ 2015 – 2018: Celanese Corporation, Narrows, VA – Process Engineer

TECHNICAL EXPERTISE

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| ✓ State and Federal air permit programs including Title V, construction permit applications, and minor source permitting | ✓ Environmental Compliance Reporting |
| ✓ Annual/semiannual compliance and emissions reporting | ✓ Environmental Compliance Auditing |
| ✓ New Source Review (NSR) analyses including NNSR and PSD | ✓ 40 CFR Part 60, Subpart Dc Compliance and Reporting Best Available Control Technology (BACT) analyses |
| ✓ Air emissions inventories | ✓ 40 CFR Part 98 Greenhouse Gas Emissions Reporting |
| ✓ Toxic Release Inventory (TRI) Reporting | ✓ Due-diligence facility reviews |
| ✓ Environmental Compliance Training | ✓ Air Permitting Project Assessments |

PROFESSIONAL OVERVIEW

Mr. Needham has over ten years of experience working in chemical manufacturing and environmental compliance. In his current role as a Consulting Engineer, Mr. Needham provides project support in environmental permitting, compliance, auditing, testing, and training, with a focus in air quality. Mr. Needham has assisted with Title V permit applications, construction permit applications, new/modified source permitting, and other State and Federal environmental programs. Mr. Needham's compliance experience includes auditing, training, performance testing oversight, U.S. Environmental Protection Agency (U.S. EPA)'s Method 9 visible emissions testing, greenhouse gas (GHG) reporting, Toxic Release Inventory (TRI) reporting, and annual emissions reporting.

Mr. Needham has served on a variety of project teams, gaining experience in several industries, such as chemical manufacturing facilities, healthcare centers, data centers, higher education institutes, automotive manufacturing facilities, wastewater treatment facilities, power generation facilities, and government facilities. Mr. Needham has experience working with clients across multiple states including Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Pennsylvania, Texas, Virginia, and Washington, D.C.

Mr. Robert Needham graduated from the Virginia Polytechnic Institute and State University in May 2015 with a Bachelor of Science in Chemical Engineering and a Minor in Chemistry. Prior to beginning his employment with ALL4, Mr. Needham spent three years working in chemical manufacturing for Celanese Corporation.



AIR QUALITY PERMITTING EXPERIENCE

Title V Initial and Renewal Applications, Multiple Clients: *Assisted in the preparation of Title V Operating Permit applications (initial and renewal) for facilities in states such as Alabama, Texas, Virginia, and Washington, D.C.*

Construction Permit Applications, Multiple Clients: *Assisted in the development of construction permit applications for minor sources in states such as Alabama, Arizona, Arkansas, California, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Pennsylvania, Texas, Virginia, and Washington, D.C.*

Best Available Control Technology Analyses, Multiple Clients: *Prepared several BACT analyses for facilities in states such as Alabama, Arizona, Florida, Illinois, Maryland, Texas, Virginia, and Washington, D.C.*

New Source Review Applicability Analyses, Multiple Clients: *Prepared several NSR analyses for facilities in states such as Alabama, Arizona, Florida, Illinois, Maryland, Texas, Virginia, and Washington, D.C.*

Buy-side and Sell-side Air Permitting Assessments, Multiple Clients: *Request and review permitting and permit compliance documentation from facilities, search local, state, and federal databases for permitting and compliance information. Provide assessment of facilities to clients to facilitate decision-making in purchasing and/or divesting from facility ownership.*

OTHER TYPES OF EXPERIENCE

Title V Site Inventory, Multiple Clients: *Participated in and led on-site meetings to develop a site-wide inventory of all emissions units and processes subject to or potentially subject to Title V permitting obligations. Completed analyses of site inventories and Title V permits to determine permitting gaps and reconcile site operations with the Title V permit.*

Facility-wide Compliance Tracking, Multiple Clients: *Developed facility-wide daily, monthly, and annual compliance tracking tools for demonstrating continuous compliance with permit limits and compliance deadlines.*

Greenhouse Gas Reporting, Multiple Clients: *Served as the lead developer for preparing annual greenhouse gas reports utilizing U.S. EPA's Electronic Greenhouse Gas Reporting Tool (e-GGRT) for facilities in Alabama, Virginia, and Washington, D.C.*



Toxic Release Inventory Reporting, Multiple Clients: *Served as the lead developer for preparing annual Toxic Release Inventory reports utilizing U.S. EPA's TRIme-WEB tool for manufacturing facilities in Alabama and Florida.*

Emissions Reporting, Multiple Clients: *Served as the lead for preparing monthly, quarterly, semi-annual, and annual air emissions inventories utilizing various state reporting tools for facilities in Alabama, Florida, Pennsylvania, Maryland, Texas, Virginia, and Washington, D.C., including use of the U.S. EPA's Combined Air Emissions Reporting System (CAERS).*

TRAINING WORKSHOPS

AQ101: Air Quality 101, ALL4 LLC (Attendee): *A training program through ALL4 that introduces air quality topics including permitting, compliance, and meteorological monitoring.*

AQ201: Air Quality 201, ALL4 LLC (Attendee): *A training program through ALL4 that dives into more complicated air quality topics including ambient/meteorological monitoring, New Source Review (NSR) permitting, and air quality compliance.*

OSHA 10-Hour Construction Safety and Health Certification (Attendee): *Training program aimed to provide awareness to personnel who may spend time at construction sites of the different hazards that may be present in those environments.*